Functionalized Hybrid Nanomagnets: New Materials for Innovations in Energy Storage and Medical Theranostics

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Imagine a future in which food is used to activate specific immune reactions in a human body based on an external noninvasive magnetic stimulus. Dream of a material that stores and releases energy reversibly by temperature changes between day and night. These visions may be realized by using magnetic nanoparticles that are functionalized to be biocompatible, environmentally stable and recyclable, self-healing, and low-cost.